

2007

Substance Abuse Severity, Treatment Motivation, and Criminal Thinking Factors : Predictors of Treatment Retention with Substance Abusing Parolees in a Correctional Aftercare Program

Loretta Joan Henkel

Philadelphia College of Osteopathic Medicine, joanhe@pcom.edu

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Philadelphia College of Osteopathic Medicine

Department of Psychology

SUBSTANCE ABUSE SEVERITY, TREATMENT MOTIVATION, AND CRIMINAL
THINKING FACTORS: PREDICTORS OF TREATMENT RETENTION
WITH SUBSTANCE ABUSING PAROLEES IN A CORRECTIONAL
AFTERCARE PROGRAM

By Joan Loretta Henkel

Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Psychology

July, 2007

**PHILADELPHIA COLLEGE OF OSTEOPATHIC MEDICINE
DEPARTMENT OF PSYCHOLOGY**

Dissertation Approval

This is to certify that the thesis presented to us by Joan Henkel
on the 23rd day of May, 2007, in partial fulfillment of the
requirements for the degree of Doctor of Psychology, has been examined and is
acceptable in both scholarship and literary quality.

Committee Members' Signatures:

Frederick Rotgers, Psy.D., ABPP, Chairperson

Virginia Salzer, Ph.D.

John Cacciola, Ph.D.

Robert A. DiTomaso, Ph.D., ABPP, Chair, Department of Psychology

Acknowledgements

My heartfelt gratitude for the completion of this project goes to all of the important people in my life who supported and encouraged me on this academic journey.

First of all, I would like to extend my gratitude the PCOM faculty and staff: Dr. Robert DiTomasso, Psychology Department Chair, for his steady guidance and exemplary leadership; Dr. Barbara Golden, Dr. Takako Suzuki, and Dr. Bruce Zahn, for their supervision and guidance during my Pre-Doctoral Internship. A very special thank you goes to Dr. Frederick Rotgers, my academic advisor, internship supervisor, and dissertation chair, and Dr. Virginia Burks Salzer, my second dissertation reader and statistical advisor, for the many hours that they spent in assisting me along the doctoral path. Also deserving of my gratitude is Angelika Mohnke, Psychology Department Program Coordinator, who was always available and pleasantly willing to provide answers to my numerous questions throughout these academic years.

I wish to also thank John Cacciola, Ph.D., who extended his time and talent to serve as my third dissertation reader, and Michael Pravetz, Ph.D., M.D., colleague and friend, whose time and constructive feedback along the way were invaluable resources.

My sincere appreciation goes to Daniel Lombardo, President and CEO of Volunteers of America Delaware Valley and the staff at the Day Reporting Center in Camden, New Jersey, for their generous support of this project.

My heartfelt gratitude is also extended to my family and community, without whom this academic endeavor would not have been possible. A sincere thank you to my mother, Loretta Henkel and my sister, Joyce Cornwell who provided the loving concern, patience,

and understanding that was so much needed over these academically-laden years.

My sincere appreciation also goes to the community of the Sisters of Mercy of the Americas for their prayerful support and encouragement. In particular, I want to extend a very warm thank you to my dear friend and companion in Mercy, Sister Rose Carmel Scalone, Ed.D., whose patient understanding, loving support, and gentle encouragement helped me to continue walking forward on this educational path.

Most of all, I thank God for the ability and strength that I needed on this journey and the perseverance that it took to finally reach my academic destination.

Abstract

Substance abuse and substance dependence are complex disorders that affect millions of people in the United States. Two notable consequences of these disorders are increased criminality and higher rates of recidivism. This archival data study of 94 parolees admitted to the Day Reporting Center, Volunteers of America Delaware Valley in Camden, New Jersey examined the influence of substance abuse severity, of treatment motivation, and of criminal thinking factors on treatment retention in a correctional aftercare treatment program for parolees with a history of substance abuse or dependence. The extent to which parolees were deceptive in reporting information was also examined.

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Substance Abuse Severity, Treatment Motivation, and Criminal Thinking Factors:
Predictors of Treatment Retention with Substance Abusing Parolees in a
Correctional Aftercare Program

The Substance Use Disorders, substance abuse and substance dependence, are complex and debilitating disorders that continue to plague millions of individual lives, families, communities, and social systems. According to the DSM-IV-TR (American Psychiatric Association, 2000), substance abuse is essentially featured as “a maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances”, whereas substance dependence is described as “a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues use of the substance despite significant substance related problems”. Additionally, substance dependence has a distinct pattern of use that often results in tolerance, withdrawal symptoms, and compulsive alcohol or other drug-taking behavior (American Psychiatric Association, 2000).

In discussing these disorders, it is important to differentiate between drug dependence and drug addiction. Drug addiction can be described as a condition which is generally characterized by compulsive drug taking, drug craving, and drug seeking, in spite of the negative consequences that are associated with it (Leshner, 2005). Although drug dependence implies drug addiction, it is possible to be dependent on a drug and not be addicted to it. For example, persons who are medically dependent on certain prescription drugs are not necessarily addicted to them. According to the National Institute on Drug Abuse (2005), drug dependence and drug addiction are not equivalent to each other. The term drug dependence implies that an individual must take the drug on

a regular basis and experience unpleasant symptoms when it is discontinued. Addiction, on the other hand, includes the exhibition of compulsive behavior toward the drug and difficulty with stopping its usage. Substance abuse can occur with or without dependence or addiction; however, long-term drug abuse can lead to drug addiction for some individuals (National Institute for Drug Abuse, 2005). For the purposes of the current study, substance-related disorders will be referred to as substance abuse or addiction, excluding drug use solely for the treatment of disease or illness. It is also important to note that alcohol continues to be the legal and socially acceptable drug of choice for many people. It is also a substance that is often associated with abuse and addiction.

Regardless of individual preference or choice, substance abuse represents one of the most destructive health and social problems faced in our nation today. Although the effects of these disorders have been studied extensively in the United States, the substance use disorders pose not only a national, but also an international problem.

Domestic violence, child abuse, motor vehicle accidents and other accidents, robbery, sex offenses, and various crimes of assault are linked to the abuse of alcohol (National Institute on Alcohol Abuse and Alcoholism, 2001). In almost one out of every four violent crimes committed, the offender had consumed alcohol prior to the crime. Drug use other than alcohol has also been linked to criminal activity.

Substance Use Disorders

Prevalence. According to the Substance Abuse & Mental Health Services Administration (2005), 126 million Americans (51.8%) aged 12 or over reported current alcohol use in 2005 as compared to 121 million (50.3%) in 2004. Additionally, 19.7

million Americans (8.1%), in that same age range, in 2005 reported using illicit drugs at least one month prior to being surveyed, representing an increase from 7.9% in 2004. Furthermore, an estimated 22.2 million Americans (9.1%) were classified with substance abuse or addiction within the year prior to the survey interview. Abbott (2002) posited the theory that, for every treated case of drug addiction that surfaces from the general population, at least three other cases remain undiagnosed. Thus, this “tip of the iceberg” phenomenon justifies the concern and sparks the fear held by many for the future of American society in general.

Substance abuse and substance addiction are rapidly reaching epidemic proportions in the United States. The social and legal systems, in particular, continue to experience the effects of this growing problem.

Social and Legal Effects. Involvement in the legal system, including the stigma associated with arrest and incarceration, usually has dramatic effects on the individual’s status in the community. Given the widespread adverse effects, it is not surprising that substance abuse and substance addiction are viewed as evil and destructive forces in our society. Not only is the addicted person’s life often destroyed, but the lives of significant others, including the family, are directly and indirectly affected as well.

The consequence of substance abuse and substance addiction that has gained considerable cause for concern is an increase in criminality, because it is not uncommon that individuals who are abusing or becoming addicted to drugs are involved in criminal activity. In order to demonstrate the high rates of substance abuse and addiction among this population, it seems appropriate to provide, initially, an indication of the growing

number of individuals who are involved in the criminal justice system.

Incarceration. According to Beck & Harrison (2001), the total number of inmates in the United States quadrupled between 1980 and 2000, raising the number from 501,886 to 2,071,686. Recently the Bureau of Justice Statistics (2006) reported that, as of December 31, 2005, there were 2,193,798 inmates housed in federal or state prisons or local jails, constituting a 2.7% increase from year-end, 2004. This represents an estimated 491 incarcerated adults per 100,000 Americans at year-end, 2005, as compared to 411 at the end of 2004 (Bureau of Justice Statistics, 2006). Needless to say, this high rate of incarceration has resulted in prison overcrowding and the building of more correctional facilities to house criminals, neither of which offers much more than a temporary solution to the underlying problem.

According to Delany, Fletcher, & Shields (2003), the link between drug abuse and criminality has been well documented. It is believed that substance abuse or addiction has been directly or indirectly responsible for a high proportion of crime in the United States. As a result of this growing problem, studies have been conducted that confirm the relationship between substance abuse and criminality (Harrison, 2001; White & Gorman, 2000), as well as the degree to which the incidence of crime and its consequences have risen over the past decade in this country.

In a 1997 survey (Mumola, 1999), 52% of incarcerated individuals reported that they were under the influence of alcohol or illicit drugs when they committed their offenses. Since then, there has been a dramatic increase in the proportion of substance abuse and crime. In 2000, the Arrestee Drug Abuse Monitoring program (ADAM) collected

data from 27 sites and found that between 51% and 79% of adults, arrested for criminal activity, had tested positive for marijuana, cocaine, methamphetamines, opiates or PCP, with 65% testing positive at more than half of the sites (Taylor, Fitzgerald, Hunt, Reardon, & Brownstein, 2001).

Delaney, et al. (2003) estimated that about three-fourths of all offenders in federal, state, and county correctional institutions have a history of substance abuse or addiction. These figures were supported in a study conducted in seven residential therapeutic community programs for substance abuse treatment in New Jersey, New York, Illinois, and Wisconsin (Cardosa, Chan, Berven, & Thomas, 2003). These researchers found that many of the 457 participants in the study were involved in the criminal justice system: 42% percent were court mandated to treatment, 50% had been convicted of at least one felony, 85% had a history of at least one arrest, and 28% had a history of multiple arrests (nine or more times). Thus the link between substance abuse and criminal activity has been well demonstrated in studies of arrest, conviction and incarceration. The question that naturally follows is what can be done about this problem?

In response to the high rates of incarceration and drug-related criminality, the Department of Corrections (DOC) has placed considerable emphasis in recent years on the identification and treatment of substance abuse and addiction in the incarcerated population. This emphasis extends beyond incarceration, because most offenders are eventually released to their communities on probation or parole. As Visser & Travis (2003) have concluded, except for those who die or who are executed while in prison, everyone eventually leaves the confines of the institution and many of them will

be finishing their sentences on probation or parole status in their communities.

Probation and Parole. According to the Bureau of Justice Statistics (2002), probation, which is generally in lieu of incarceration, can be described as the placement of adult offenders on community supervision by the courts. Parole, on the other hand, refers to the conditional release of adult offenders to community supervision either by the decision of the parole board or by mandatory conditional release following a prison term.

It was reported by the Bureau of Justice Statistics (2003) that approximately 592,000 state prison inmates nationwide were released from correctional facilities to the community in 2001, and by the end of 2002, there were 670,169 adult offenders under state parole supervision. It was estimated that, as of December 31, 2003, there was a total of 4,073,987 adults on probation and 774,588 adults on parole at the federal, state, and local levels. By the year end 2005, this number had grown to 4,162,500 on probation and 784,400 on parole, a total of 4.9 million adults under federal, state, or local probation or parole supervision (Bureau of Justice Statistics, 2006).

Glaze (2002) stated that the majority (84%) of all offenders who are released from federal, state, or county prisons and who reenter their communities continue to be under some form of supervision. As a result of these growing numbers, the issues surrounding the process of prisoner release into the community have gained prominence in the criminal justice system (Petersilia, 2003; Visser & Travis, 2003). According to Abadinsky (2003) and Champion (2002), between 80% and 90% of the offender population has in some way experienced problems with alcohol and/or illicit drugs.

Bucklen (2004), in studying the drug screening scores of parolees, found that approximately two-thirds both of successful parolees and of parole violators had a substance addiction problem. There was no significant difference between the drug screening scores of these two groups.

In a study of parole violators in Pennsylvania (Bucklen, 2005), 66% of the offenders surveyed reported having substance abuse problems at some point and 57% admitted to using alcohol/drugs while on the previous parole. Evidence gathered in this report showed that: drugs used by parolees were alcohol (67%), crack or cocaine (45%), marijuana (26%), and heroin (15%); and a significant number of them drank alcohol or used drugs on a regular basis. For a significant proportion of the inmates surveyed, it was evident that alcohol/drug problems were clearly related to their parole violations (Bucklen, 2005).

The high rate of substance abuse has devastating effects not only on the substance abuser or addict, but also poses public health and safety risks (Delany, et al., 2003). Yet according to Leshner (2000), severe consequences, such as involvement in the criminal justice system, have not always been a successful deterrent to substance abusers and addicts to stop using alcohol and/or illicit drugs. The powerful hold that addiction tends to have on its victims can be readily seen in the high numbers of paroled offenders who return to active addiction and/or substance related crimes, only to continue the vicious cycle known as recidivism.

Recidivism. The number of arrests is one of the ways that recidivism has been measured. The most widely used definition, however, refers to the return of individuals to

institutional custody after their releases to the community as a result of committing new crimes or violating the conditions of the parole agreement (Flaherty, 2006).

According to the Bureau of Justice Statistics (2006), fewer than half (45%) of parolees who were released to parole supervision successfully completed their terms of supervision. Moreover, this figure has not significantly changed since 1995. Ideally these individuals were expected to reintegrate with their communities and lead productive lives. The reality is that many of them failed in these endeavors due to substance abuse and related problems (Travis, Solomon, & Waul, 2001).

Langan & Levin (2002) reported that over two-thirds (68%) of the offenders in their study who were released from prison were arrested for committing a new crime within three years of their release. Furthermore, these researchers found that almost one-half (47%) of released offenders were convicted of a new crime and over one-half (52%) were returned to prison with a new crime or a technical parole violation.

While under parole supervision, parolees are expected to abide by certain technical conditions of parole, e.g., no use of alcohol or illicit drugs. Travis & Lawrence (2002) acknowledged that these types of violations are not necessarily the result of breaking the law; however, they carry the potential penalty of a return to prison. Some studies (Marlow, 2002; Martin, Butzin, Saum, & Inciardi, 1999) found that approximately 85% of substance-abusing offenders had returned to drug use within one year and 95% within three years of being released from prison.

The U.S. Department of Health and Human Services (2005) reported that 16,397 (7.6%) of the 215,300 adult parolees surveyed in 2004 admitted to illicit drug use in the

previous month. In 2005, 217,865 adults on parole status were surveyed and 17,209 (7.9%) of these reported illicit drug use. Of these numbers, an overwhelming majority of parolees reported using marijuana and hashish, i.e., 12,667 (5.9%) in 2004 and 12,896 (5.9%) in 2005. According to the National Institute on Drug Abuse (2005), marijuana is considered the most commonly abused drug in this country. Thus if marijuana and hashish were factored out of the equation, the amount of illicit drug use by parolees would be substantially lowered. It is also important to note that these figures represent drug “use” and do not differentiate between drug use, abuse, and addiction.

Nonetheless, a growing number of parolees are returned to prison each year as a result of violating their conditions of parole, and many of them are violated because of substance abuse (Lynch & Sabol, 2001). It is important to note that many technical parole violations involve the use of illicit drugs, such as marijuana, amphetamines, cocaine, and heroin. Any use, whatsoever, of these substances while on parole is considered to be drug “abuse”. It is then the “illegality” of using these drugs that accounts for the high rates of parole violations and re-incarceration and not the substance itself.

For many parolees, the use of any amount of alcohol constitutes a violation of the parole agreement and often precipitates the return of the parolee to institutional custody. In an attempt to break this continuing cycle of relapse and recidivism, the criminal justice system in recent years has dramatically increased its focus on the issues of prisoner rehabilitation and reentry.

Prisoner reentry. In response to the surge of interest in prisoner reentry, the federal government, between 2001 and 2004, allocated more than \$100 million for new reentry

programs. Special task forces were created to work on these projects. The issue of reentry was even highlighted in the President's State of the Union Address in 2004 and a four-year \$300 million initiative was proposed to help inmates who are returning to their communities (Petersilia, 2003). Despite the spark of interest and funding made available for reentry programs, however, the number of inmates being released to their communities on probation and parole has continued to grow beyond the allotted resources. In addition, many of these individuals have histories of substance abuse or addiction and/or histories of substance-related criminal offenses.

Offender Rehabilitation. In response to the growing numbers of substance abuse and addiction in the offender population, both the DOC and the Board of Probation and Parole in the United States have joined efforts in the treatment and rehabilitation of the substance-abusing or addicted offender. Delany, et al. (2003) related the idea that, without agency collaboration in the treatment process, the probability of relapse and recidivism would most likely remain high.

Initial studies of treatment with offenders (Martinson, 1974) concluded that "nothing works". Gendreau & Ross (1979), however, challenged this negative stance and identified the Principles of Effective Correctional Intervention, using them to distinguish between programs that were effective and those that were not (see Appendix A). Andrews & Bonta (2003) explained that the "nothing works" theory might be accurate if correctional punishment was the "treatment" utilized at that time. Fortunately, however, literature reviews and meta-analyses have since provided strong evidence of the effectiveness of treatment and rehabilitation programs in changing offender behavior

(Andrews, Bonta, & Hoge, 1990).

Marlow, Patapis, & DeMatteo (2003) posited the theory that relying on imprisonment to solve the problem has done little to ebb the tide of crime or reduce the illicit use of drugs. Furthermore, these researchers stated that implicit in any offender rehabilitation initiative is the belief that offenders are reasonably likely to benefit from treatment in lieu of imprisonment. Historically, the most widely utilized substance abuse treatment modality for rehabilitation of the criminal justice offender has been rooted in the Twelve-Step model of recovery.

The Twelve Step Treatment Model

Origin and Philosophy. The Twelve-Step Program of AA (Alcoholics Anonymous, 1952) and the more recently founded NA (Narcotics Anonymous, 1983) operate under the premise that recovery is possible only through surrender of one's will to a Higher Power and through changing addictive attitudes and behaviors via a lifetime, albeit "one day at a time" commitment to sobriety. This approach to recovery relies on achieving abstinence from mood and/or mind-altering drugs through program attendance and through sponsorship (Ronel, 2000).

The First Treatment Model. Based on the AA fellowship, the Minnesota Model, which originated in the Minneapolis/St. Paul area, is more commonly known today as the Twelve-Step model. This treatment model, which emphasizes recovery through a lifestyle change organized around the AA philosophy (Winters, Stinchfield, Opland, Weller, & Latimer, 2000), has had a significant influence both on inpatient and on outpatient treatment for the substance abuse problems that exist today.

However, many treatment professionals currently believe that abstinence is often an essential part of the recovery process; however, it is not an all-inclusive guarantee of optimal life functioning. For them, treatment goals can be divided between those aimed at achieving and maintaining a drug-free lifestyle and those aimed at maximizing multiple aspects of life functioning. In addition, the high relapse rates that are associated with the substance-related disorders yield a third and necessary goal, which must be aimed at relapse prevention (Rotgers, Morgenstern, & Walters, 2003).

Prison-Based Programs. The treatment milieu that has shown the most promise in treating the substance-abusing inmate is the Therapeutic Community (TC). The TC model can be defined as a highly structured, community-oriented substance abuse treatment program, segregated from the general prison population, which historically has been based on the Twelve-Step approach to treatment and recovery. It is within this model that inmates learn about the addiction process and recovery through sobriety, most of which takes place both in large and in small group settings.

To date, the most comprehensive study of prison-based treatment programs for substance addicted offenders was conducted by Porter (2002). This study examined the efficacy of the three-phase Residential Substance Abuse Treatment (RSAT) program for seriously addicted technical parole violators (TPVs); the program included six months in a prison-based TC; six months in a Community Corrections Center (CCC), post release from prison; and six months intensive parole supervision, post CCC. The RSAT program utilized the conventional Twelve-Step model of treatment.

Findings showed that 89% (n=366) of the 412 inmates who entered the study

completed Phase I (TC), and 63% (n=260) of the participants who completed Phase I successfully completed Phase II (CCC placement). By the end of Phase III (intensive parole supervision), however, only 56% (n=232) of the total research sample had successfully completed the 18-month program. Thus outcome studies of the RSAT program concluded that this type of intensive treatment for drug addicted inmates, most of whom were TPVs, had little or no effect on recidivism. Actually, the recidivism rate for the RSAT group was even slightly higher than it was for the TPV comparison group (Zajac & Bucklen, 2004).

However, results of an earlier study of 715 inmates in a TC treatment program for substance abuse funded by the California Department of Corrections in 1990 yielded quite different results (Prendergast, Hall, Wexler, Melnick, & Cao, 2004). This three-phase treatment model consisted of a two to three month assessment phase, a five to six month treatment phase, and a one to three month reentry phase. In addition, graduates were offered an optional six to twelve-month residential aftercare treatment program. In examining outcomes of the TC program, these researchers found statistically significant treatment effects at five-year post release, using the outcome variable of recidivism, i.e., re-incarceration. Drug abuse severity, excluding alcohol and marijuana, and employment in the year prior to the post-release interview were also examined. When comparing the TC group with the no-treatment control group, TC participants experienced a significantly lower five-year recidivism rate (75.7% versus 83.4%). The study also found that the individuals who volunteered to participate in residential aftercare showed a 4% decrease in recidivism for each additional month spent in post-release treatment. The

variables of drug use severity and employment did not show any significant differences between the treatment group and the control group. One of the conclusions that can be drawn from this study is that maintaining an individual in treatment longer tends to produce more favorable outcomes.

These findings were supported by Burdon, Messina, & Prendergast (2004) in a study examining the interaction of several treatment variables and aftercare treatment participation. Over 4,000 inmates in the California DOC, who had been identified as having an addiction to drugs, were followed at one-year, post release from prison. The study was not as much concerned with whether or not the TC concept worked, but rather with the factors that might have predicted an effective treatment outcome. Results of this study demonstrated that each additional month spent in the prison-based TC had reduced the chances of recidivism by four-percent. In addition, results showed that those offenders who had participated in a mixture of residential and outpatient aftercare treatment spent a total of 192 days in treatment; those who had only outpatient aftercare spent a total of 113 days; and those who had only residential aftercare spent a total of 102 days in treatment. These statistically significant findings reinforce the conclusion of previous researchers (Prendergast, et al., 2004), i.e., the amount of time spent in treatment is one of the most powerful predictors of successful post-release outcomes.

Thus it appears that TCs have been studied extensively and that many researchers have concluded that the traditional TC model, particularly when followed by some form of aftercare component, can be effective in reducing both substance abuse and recidivism. Yet there are other studies that have yielded less positive results. The difference might

be found in the treatment modality provided within the TC structure and program delivery.

Following this rationale, it appears that the Twelve-Step model of treatment alone has shown promise with regard to increasing the inmate's knowledge base and maintaining a sober lifestyle while incarcerated; however, overall relapse and recidivism remain quite high for this population once they leave the confines of the prison. It might be concluded that substance abuse treatment utilizing the Twelve Steps of AA/NA alone has achieved limited success in providing effective substance abuse and substance addiction treatment for the criminal justice population.

As a result of high relapse and recidivism rates following traditional, prison-based treatment, the DOC in several states, in its quest to provide effective correctional rehabilitation and prisoner reentry into the community, began to consider alternatives to this conventional model. According to Andrews & Bonta (1994), the accurate and objective assessment of the offender's risk for recidivism, for treatment needs, and for responsivity factors is considered a critical feature of any effective treatment program in the correctional system.

To further substantiate this point, meta-analyses of treatment programs for corrections (Andrews, Bonta, & Hoge, 1990) found that in order to be effective, these programs must follow several basic principles. The treatment program must be carefully designed to target dynamic factors that predict criminal or antisocial attitudes and behavior, drug use, and anger responses. It must be appropriately implemented for the offender population and deliver evidence-based therapeutic techniques by duly qualified

staff. In addition, the program must deliver sufficient treatment dosage and provide the most intensive treatment to the highest risk offenders. Finally, an effective treatment program must utilize a cognitive-behavioral treatment methodology that provides individualized treatment programming and emphasizes positive reinforcement contingencies for pro-social behavior. The Principles of Effective Correctional Intervention (Gendreau & Ross, 1979) emphasize the use of evidence-based practices for the treatment of substance abuse and addiction, such as those that are found in the cognitive-behavioral models of treatment.

Cognitive Behavior Therapy Model

Framework and Description. The treatment model for substance abuse and substance addiction that has gained considerable recognition in the field of forensic psychology is Cognitive Behavior Therapy (CBT). This therapeutic model has shown encouraging success in achieving initial abstinence and in retaining clients in treatment. Within this framework is the belief that substance abusing/addicted clients have certain dysfunctional and self-defeating structures that prompt distorted thinking in specified situations. According to the cognitive perspective, the manner in which people interpret specific situations or events influences the way in which they feel, act and are motivated. Cognitive processes also shape reactions to the physiological sensations that are associated with cravings or with “triggers” for relapse (Beck, Wright, Newman, & Liese, 2001).

Treatment Components. CBT draws upon both cognitive and behavioral change strategies for alleviating the client’s level of personal distress and for enhancing his or her

coping abilities (Dobson, 2001). To achieve the targeted goals of a sober lifestyle, CBT incorporates three core elements: functional analysis, coping skills training, and relapse prevention (Rotgers, et al., 2003).

Through a functional analysis of the client's addictive and criminogenic behavior, both the antecedents and the consequences of those behaviors that act both as trigger and as maintenance factors are identified. Without this evaluation, treatment efforts are most likely to fail, because a thorough and comprehensive assessment serves as the springboard for an efficacious treatment experience.

Development of appropriate coping skills is at the heart of CBT (Rotgers, Keller, & Morgenstern, 1996). A person who is addicted to drugs and/or has a history of criminal behavior beginning at a young age may never have developed coping skills, because early onset of these maladaptive behaviors tends to impede the development of age-sensitive skills. Others may have coping skills available to them, but are inhibited in some way from using them. In the CBT model, clients are taught two coping behaviors: avoidance of situations associated with substance abuse and criminality and seeking social support when confronted with the temptation to pick up a drink/drug or resort to some type of criminal behavior.

The third core element of CBT is relapse prevention, which deals directly with the cognitions involved in the relapse process and assists the client in changing the accompanying sense of helplessness (Rotgers, et al., 1996). This task is usually accomplished toward the end of treatment. Relapse prevention is a critical component of the recovery process, because one positive urinalysis for drugs and/or one act of criminal

behavior can end a parolee's program participation and return him or her to prison.

The therapist helps clients to recognize the situations and circumstances under which they are most likely to relapse to former behaviors, to find ways of avoiding those situations, and to cope more effectively with feelings and behaviors related to their substance abuse (Beck, et al., 2001) and criminal behaviors.

Treatment Effectiveness. Numerous studies utilizing CBT for the treatment of substance abuse and addiction in the criminal justice population have been conducted to examine the efficacy of this therapeutic model. In examining cognitive-behavioral treatment modalities in the substance-abusing prison population, Flynn, Kristiansen, Porto, & Hubbard (1999) studied 502 cocaine-dependent individuals in 10 different cities in the United States. Results of this study indicated that the patients who received CBT both in long-term residential prison-based treatment and in outpatient programs had reductions in crime after completion of treatment.

In a comprehensive statistical review of 291 adult correctional program evaluations over the last 40 years in the United States and other English-speaking countries, Aos, Miller, & Drake (2006) concluded that the adult correctional system would be more successful in reducing recidivism if treatment focused on evidence-based treatment approaches. More specifically, these researchers found that traditional in-prison TCs for drug offenders reduced recidivism by 5.3 percent and that adding community aftercare produced only a modest increase of 6.9% in program effectiveness. When examining CBT in-prison treatment programs for the general offender population, however, these authors found a significant 8.2 percent reduction in recidivism.

In addition, Steiner (2004) posited the theory that TCs are most effective when they include a cognitive treatment component and focus on risk, needs, and responsivity factors. Much evidence supports program operations that adhere to these principles (Andrews, 1995; Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen (1990), Cullen, 2002; Cullen and Gendreau, 2001; Gendreau, 1996).

Steiner (2004) posited the theory that prison-based TCs, in conjunction with cognitively-based aftercare treatment, are effective in reducing recidivism, particularly for those offenders who successfully complete the aftercare program. Thus retaining the parolee in treatment until the aftercare program was completed, yielded promising results both in achieving abstinence and in reducing recidivism (Chanhathasilpa, MacKenzie, & Hickman, 2000; Inciardi, Martin, & Butzin, 2004).

These results were supported in a parole violator study in the Pennsylvania DOC (Bucklen, 2005). Surveys were administered to all recidivist offenders ($n = 471$) for two months at 12 different state correctional institutions, and focus groups were conducted with approximately 60 parole violators at several institutions. The comparison group that was utilized in this study consisted of those parolees who successfully remained either on parole or in their communities for a minimum of three years, post release from prison. A total of 186 surveys were returned from the 704 surveys mailed.

There were several conclusions drawn from this study. A significantly greater proportion of parole violators used drugs while on parole; this is in contrast, of course, to those who did not use drugs and successfully completed their parole. In addition, prison-based substance abuse treatment, particularly TC programming, had a significantly

positive effect. Parolees who had completed a TC program reported that they were better prepared to deal with substance abuse problems than their TC non-participant counterparts. Those who completed the RSAT program, however, did not feel that they were any better prepared than the RSAT non-participants. It is important to note that the RSAT program was primarily based on a Twelve-Step treatment model and that TCs in the Pennsylvania DOC now follow an evidence-based CBT model of treatment. It is also noted that many of these results were based on successful program completion, which brings up the issue of retention in treatment. Although the majority of inmates successfully complete in-prison programs, the same is not necessarily true for parolees in community-based treatment programs.

According to Steiner (2004), treatment providers and parole authorities have been limited in their abilities to compel parolees to stay in treatment after their releases from prison. Thus efforts continue on the part of the criminal justice agencies to identify those factors that are positively related to treatment retention and program completion for this population.

Because of the high rates of recidivism and prison overcrowding, there has been an increase in community-based treatment for the parolee population. This provides a viable alternative to prison confinement, particularly for individuals who violate probation or parole due to relapse issues.

Community-Based Treatment for Prisoner Reentry

As an alternative both to incarceration and to traditional probation, Day Reporting Centers (DRCs), which originated in Great Britain in the early 1970's, are now well

established across the United States; these Centers are in place for offenders who are on pretrial release, on probation, or on parole (Parent, 1995). These are highly structured and closely supervised non-21 residential treatment programs that allow parolees to live with family, with significant others, or independently while attending treatment (Lurigio, Olson, & Sifferd, 1999). Treatment programming is conducted seven days a week, targeting the parolee's level of risk for recidivism and for specific treatment needs, such as substance abuse issues and criminal thinking, attitudes, and behavior. As the individual progresses through the various program phases in a step-down fashion, securing employment and/or educational pursuits become paramount. The average length of stay in a DRC is 90 days. It is anticipated that the parolee will successfully complete the treatment program and continue to live a pro-social lifestyle, post treatment. However, the success of these programs in retaining participants in treatment until the completion of their treatment has produced varying results.

Diggs & Pieper (1994) found program completion rates of around 80% in two separate DRCs, one in Florida and one in Massachusetts. More generally, Parent, Byrne, Tsarfaty, Valade, & Esselman (1995) reported a mean termination rate for DRCs of around 50 percent. An evaluation of the Fairfax DRC in Virginia supported this finding with a 50% successful completion rate (Virginia Department of Criminal Justice Services, 1996).

Brunet (2002) conducted evaluations on two 40-day DRCs in Davidson County and Guilford County, North Carolina, in order to examine ways of improving the programs. Data collected at the Davidson DRC in the first 17 months of operation, January 1996 to

May 1997, showed an 18% successful completion rate: 12 successful and 55 non-successful completions. This figure is considerably lower than most DRC rates. All participants were assessed as having a substance abuse/addiction problem. In the Guilford DRC, data were collected from December, 1995 through July 1997. Results showed that 37% had successfully completed the program: 36 successful and 61 non-successful. In the Guilford study, 70% of the participants were assessed as having a substance abuse or addiction problem.

In another study, Roy & Grimes (2002) examined data from adult participants in a DRC operated by the Indiana Department of Community Corrections during 1998 and 1999. These researchers attempted to determine which predictor variables were related to exit status; i.e., whether or not individuals successfully completed the program or failed to complete the program. Results indicated that 125 (69%) of the participants had successfully completed treatment, but 54 (31%) failed to complete treatment due to absconding or to revocation of parole. Several variables were found significantly related to successful completion, including age (40 or over), marital status (married), history of alcohol/drug abuse (shorter history), and duration of commitment to treatment (shorter).

The Georgia DOC has one of the largest prison systems in the country. In coordination with the Board of Probation and Parole, the Georgia DOC operates a DRC in Atlanta as a “last chance” alternative to prison for substance abusing offenders. This is a six-month, day-reporting program followed by six months of aftercare treatment. Intensive supervision and cognitive-behavioral interventions are offered as an alternative to incarceration for probationers and parolees who have not been successful in adhering

to standard supervision conditions. In the first three years of operation, 135 residents completed the program, and only nine of them were arrested for a new crime (Georgia Department of Corrections, 2006).

In reviewing the various studies and evaluations conducted with the DRC populations in various states, it is clear that these programs have yielded a wide range of successful completion rates. What seems obvious, however, is that the DRC programs, which utilize a cognitive-behavioral approach to treatment and which are longer in duration, tend to produce the most favorable completion rates as well as lower incidences of recidivism.

Despite treatment efforts to identify the most efficacious treatment modalities that are available for the substance abusing criminal justice client, high rates of substance abuse and substance-related crime continue to affect our families and communities. Studies have explored numerous variables that may be related to successful programming. However, none of them has proven to be conclusive. Assuming a positive relationship between treatment retention and successful treatment programming, the current study was initiated in an attempt to isolate some of the plausible factors that may be related to treatment retention. This study examined the effects of three predictor variables: substance abuse severity, treatment motivation, and criminal thinking, on the outcome variable, i.e., treatment retention or completion.

Substance Abuse Severity

Several studies have been conducted to examine the effects of substance abuse severity both on treatment entry and on treatment retention. The assumption is that those

individuals who enter and successfully complete programming will continue to maintain sobriety, post treatment. However, Kaskutas, Weisner, and Caetano (1997) and Finney and Moos (1995) did not find a significant relationship between substance abuse severity and treatment retention or completion.

Severity of substance abuse has also been inconsistently associated with treatment entry (Zule, Lam, & Wechsburg, 2003). Some studies found positive relationships between substance abuse severity and treatment entry (Kaskutas, et al., 1997; Finney & Moos, 1995), yet others (Hser, Maglione, Polinsky, & Anglin, 1998) found no significant relationship between substance abuse severity and treatment entry.

There seems to be greater focus on measuring substance abuse severity with post-treatment substance use and recidivism. Research has shown greater substance abuse severity as predictive of elevated substance use, post treatment (Moos, Finney, & Cronkite, 1990). In a Pennsylvania prison study, Bucklen (2004) examined drug/alcohol assessment results of offenders at the time of their releases from several State Correctional Institutions. Results of this study indicated no significant difference in substance abuse severity between TPVs who had been returned to prison and those who succeeded on parole or in their communities, three years post release.

Thus, the few studies found on substance abuse severity, as a predictor of treatment retention or completion, have failed to show a significant relationship between the two factors. One possible explanation for these findings might be that substance abuse severity alone is not a good predictor of whether or not an offender succeeds or fails. Rather, it may yield more positive results when combined with other predictor variables,

such as treatment motivation or readiness.

Treatment Motivation

Motivation for treatment, according to Tsogia, Capello, & Orford (2001) is a complex construct that is both defined and measured inconsistently. Moreover, the factors that are involved in motivation for treatment when substance abuse is present seem to be poorly understood. Prochaska & DiClemente (1984) posited the theory that a client's readiness to make the necessary lifestyle changes must be taken into consideration in the therapeutic process; this includes the treatment of substance abuse/addiction and of substance-related disorders.

Moreover, research indicates that in order for people to alter unsafe health behaviors, they must be aware that a problem exists, that the problem is serious, that they are vulnerable, and that the problem poses an imminent risk (Prochaska & DiClemente, 1992). These researchers further stated that the individual must hold certain beliefs: namely, that the risk can be reduced or that something can be gained by accepting assistance, that treatment does work, and that he or she is capable of taking the steps necessary to effect the needed change.

According to Miller & Rollnick (2002), patient motivation is an important factor in the treatment of substance abuse and addiction. Andrews & Bonta (2003) have stressed the importance of following evidence-based practices in the field of criminal justice, which includes the recommendation that treatment staff be responsive to motivational issues with offenders. In this regard, several studies have been initiated to examine the effect of treatment motivation or readiness on various outcome variables.

Although there is limited research on the effects of motivation on treatment retention, many studies have shown the relationship between treatment motivation and substance abuse severity. One such study was conducted to examine the levels of motivation or treatment readiness in African-American cocaine users (Zule, et al., 2003). These researchers found that subjects with greater severity of alcohol or other drug use, along with prior treatment and problems and needs in other areas, were more likely to express a desire for treatment or to be “treatment ready”. These findings would corroborate the “bottoming out” concept (Shen, McLellan, & Merrill, (2000); i.e., only when persons hit bottom will they be amenable to treatment.

Rapp, Siegal, & DeLiberty (2003) also found that higher levels of motivation at treatment entry were positively and consistently related to the severity of substance abuse with crack or cocaine use as the most serious problem.

These findings supported earlier studies (Boyle, Polinsky, & Hser, 2000), which indicated that higher levels of substance abuse severity, in conjunction with treatment history and social/economic problems, were predictors of treatment motivation or readiness. Research studies currently seem to support substance abuse severity as a predictor, at least in part, of an individual’s level of motivation for entering treatment, but not necessarily for treatment retention. Taking it a step further, what does research tell us about motivation as a predictor of program entry or retention?

Several studies conducted with out-of-treatment drug users found motivation and perceived readiness for treatment to be important predictors of clients entering treatment (Boyle, et al., 2000; Neff & Zule, 2002; Weisner, Mertens, Tam, & Moore, 2001). In

addition, Joe, Simpson & Broome (1998) found treatment readiness or motivation to be significantly predictive both of 90-day retention in long-term residential treatment and of 360-day retention in outpatient methadone program settings.

Thus it seems that, albeit limited, research efforts have shown a positive relationship between treatment motivation and treatment retention or completion. Miller & Rollnick (2002) cautioned, however, that motivation in the context of mandated drug treatment programs is complicated by the fact that patient motives may range from personal interest in behavioral change to external coercion from the criminal justice system. Blanchard, Morgenstern, & Morgan (2003) related the idea that people who feel coerced into treatment by courts or employers are not always ready or motivated to make changes in their lives. It is believed by many that the customary practice of mandating individuals to substance abuse treatment may not only be ineffective, but also counterproductive in some instances.

These findings were not supported in another study (Rapp, et al., 2003), which found that the coercion that accompanies legal system involvement was not significantly related to levels of motivation. Therefore the tendency to see court-referred individuals as not motivated could easily distort the beliefs and expectations of treatment staff regarding a parolee's motivation for treatment engagement and completion.

The complexity of this issue is compounded by yet another variable that seems to be inherently present in the criminal justice population, and one that evokes considerable interest in the treatment of the substance abusing offender, viz., criminal thinking.

Criminal Thinking

According to Samenow (2004), little seems to have changed with regard to the deeply entrenched beliefs about what causes crime. Although some continue to view criminal behavior as symptomatic of underlying psychological or sociological problems, others tend to blame society for crime rather than blaming the criminal. Samenow (2004) argued that all criminals share a particular mind-set, which is often evident in childhood. Furthermore, this way of thinking and viewing the world is “disturbingly different” from that of any responsible, law-abiding citizen.

Crime, according to Samenow (2004), invades every aspect of our lives and communities. Prisons are overcrowded and recidivism rates continue to escalate. Many treatment programs for substance abuse and addiction fall short of success and every social institution has been blamed for contributing to crime. Samenow (2004) states that if we are to find a truly corrective treatment program, we must initially start with the understanding that the criminal rejects society and chooses crime. Habilitation efforts are definitely needed to assist the criminal in his or her efforts to view the self realistically and to develop the responsible thought patterns that are believed necessary to bring about behavioral change. Another challenge is keeping offenders in treatment, because they tend to become bored quite easily and are not considered “long-distance runners”.

According to Wilson, Bouffard, & MacKenzie (2005), “offenders behave like criminals because they think like criminals”. Furthermore, there is a mutual dysfunctional reinforcement cycle that occurs between criminal thinking and criminal behavioral patterns that produces criminal recidivism. Offender thinking errors include *what* they

think (cognitive distortions, attitudes, values and beliefs) and *how* they think (cognitive skills deficits, ineffective decision making and problem solving skills).

With regard to cognitive factors, individuals who are involved in the criminal justice system are often concerned about the impressions that they give to others. It is believed that truthful persons do not tend to be as concerned with impression management as those who are distorting the truth. Those individuals who attempt to deceive others are more likely to construct reports that they think will make credible impressions and omit any information that they believe will damage their images (Kohnken, 1999). Attempts to deceive, therefore, may be connected to the ways in which criminals think and act. In this regard, several studies have examined the effectiveness of cognitive-behavioral treatment programs in reducing recidivism by changing criminal thinking and behavior.

Wilson, et al. (2005) reviewed 20 studies of offender-based treatment programs in North America, Western Europe, and Australia and found that on the whole, CBT programs were more effective at reducing recidivism than other types of treatment or of no treatment. Results showed reductions of up to 25%, which equated to a 37.5% rate of recidivism for the CBT group and a 62.5% rate of recidivism for the control group. Wilson, et al. (2005) concluded that CBT programs are most effective in the treatment of the criminal justice population because they assist the offenders in the restructuring of antisocial thinking patterns and development of new pro-social behavioral skills.

Landenberger & Lipsey (2005) drew similar conclusions in their review of 58 experimental and quasi-experimental evaluations of offender treatment programs that

utilize CBT to assist offenders in changing criminal thinking. Findings showed CBT to be a particularly effective treatment intervention for reducing recidivism 20 to 30% when compared to control groups. Although no studies were found that examined the relationship between criminal thinking and treatment retention, criminal thinking seems to be a variable of interest as a predictor of maintaining an offender in treatment.

All of the above factors hold plausible explanations for the difficulties experienced by treatment professionals in the addictions field when they attempt to engage and maintain clients in the treatment process. In addition, a more sobering aspect of substance abuse treatment seems to lie within the limited success that treatment models and programs, which are designed to address this problem, have encountered over the years. The societal consequences of substance abuse and addiction continue to reflect the devastating impact that it has on individuals, families, and community life, as well as the multiple constituencies involved in the criminal justice system. In recent years, these far-reaching effects have led treatment providers to explore specific factors that may be associated with client success in the treatment process.

The current study is designed to examine whether or not the predictor variables of substance abuse severity, of motivation, and of criminal thinking have an impact on program survival for parolees in a correctional aftercare program, which utilizes a cognitive behavioral approach to treatment.

Hypotheses

Hypothesis 1: parolees with higher levels of substance abuse severity would stay in treatment longer than parolees with lower levels of substance abuse severity.

Hypothesis 2: parolees with higher levels of motivation would stay in treatment longer than parolees with lower levels of motivation.

Hypothesis 3: parolees with higher levels of criminal thinking would stay in treatment for a shorter period of time than parolees with lower levels of criminal thinking.

This study was further designed to examine whether or not parolee participants answered the questionnaires in a candid manner.

Method

Participants

The current study was based on archival data collected on 94 adult male parolees who were admitted to the outpatient treatment services at the Day Reporting Center (DRC), Volunteers of America Delaware Valley (VOADV) in Camden, New Jersey. The State Parole Board in New Jersey works in partnership with DRC staff to deliver quality treatment services to individuals under parole supervision and to guide them toward successful reentry into their communities. All participants in this study were English-speaking and were literate in the English language.

Participant information was treated in accordance with the “Ethical Principles of Psychologists and Code of Conduct” (American Psychological Association, 2002). Approval was granted by the Institutional Review Board (IRB) to conduct this study.

Materials

Paulhus Deception Scales (PDS). This self-report questionnaire includes 40 statements, which are based on a 5-point Likert scale anchored by “Not True” (1) to “Very True” (5). Answers indicate the degree to which each statement reflected the respondent’s beliefs. The PDS was utilized to assess the respondent’s tendency to provide socially desirable responses on two subscales: Self-Deceptive Enhancement (SDE), measuring the tendency of the respondent to give candid but inflated descriptions of one’s self as a result of egotistical self-regard and self-importance, and Impression Management (IM), measuring the attempts of respondents to appear socially and morally favorable to others (Paulhus, 2005).

The PDS was utilized in the current study to determine if the parolees in the group were being candid in their responses on the other questionnaires, particularly because individuals in the criminal justice population historically tend to manipulate their treatment needs and/or services. For example, it is not uncommon for an arrestee to plead his or her “need for substance abuse treatment” in front of the judge at sentencing. In this regard, it is more likely that he or she will be mandated to complete inpatient rehabilitation in lieu of incarceration. Once in the treatment program, however, he or she may then provide the assessment staff with an extremely limited substance abuse history.

Similarly, a parole violator mandated to a DRC may attempt to manipulate his or her drug screen score so that he or she is not recommended for the substance abuse treatment component. Given this tendency toward deception, the PDS was administered to each of the parolees upon his admission to the DRC in an attempt to minimize any manipulative efforts on his part in the completion of the other questionnaires (see Appendix B).

Three reliable and well-validated instruments designed by researchers at the Texas Christian University (TCU) for use with criminal justice populations were also utilized to assess critical variables that may have an influence on treatment retention or completion: The TCU Drug Screen II, the TCU Treatment Motivation Scales, and the TCU Criminal Thinking Scales (TCU Institute for Behavioral Research, 2006).

TCU Drug Screen II. This drug-screening instrument has been specifically adapted for self-administration and serves as a tool for identifying inmates according to substance abuse treatment needs. The 15-item screening tool represents the key clinical and diagnostic criteria for the Substance Use Disorders in the DSM-IV-TR (American

Psychiatric Association, 2000). The total possible score range is zero (0) to nine (9), with scores of three (3) or greater indicating a relatively severe problem. In addition, there are specific questions that are designed to reveal the amounts and frequency of drug use, and what drugs, including alcohol, that the respondent believes to be the underlying cause of his or her substance-related problems.

This questionnaire was selected for the current study for three reasons: its widespread use as a screen for substance use, abuse and addiction with the criminal justice population, its user friendly self-administration feature, and its ability to provide additional information regarding the individual's drug use. The TCU Drug Screen II was administered upon the parolee's admission to the DRC program to obtain information regarding the severity of substance abuse among parolees in the DRC program (See Appendix C).

TCU Treatment Motivation Scales. This instrument, which was taken from the TCU Client Evaluation of Self at Intake form, was utilized to measure treatment motivation. The scale consists of 29 questions, which are based on a 5-point Likert scale anchored by "Strongly Disagree (1) to "Strongly Agree" (5). Responses are grouped under four subscales: Problem Recognition (PR), Desire For Help (DH), Treatment Readiness (TR), and External Pressures (EP). The TCU Treatment Motivation Scales instrument was utilized in the current study for two reasons: its specific design to measure treatment motivation levels in the criminal population, and its user friendly self-administration feature. This questionnaire was administered to each parolee upon his admission to the DRC Program (See Appendix D).

TCU Criminal Thinking Scales. This instrument was utilized to measure the parolee's level of criminal thinking. The scale consists of 37 questions, which are based on a 5-point Likert Scale anchored by "Strongly Disagree" (1) to "Strongly Agree" (5). Responses are grouped under six subscales: Entitlement (EN), Justification (JU), Power Orientation (PO), Cold Heartedness (CH), Criminal Rationalization (CN), and Personal Irresponsibility (PI). The TCU Criminal Thinking Scales questionnaire was utilized in this current study for several reasons: its unique design, its ability to measure the level of criminal thinking in the criminal justice population, and its user friendly self-administration feature. This questionnaire was administered to each parolee upon his admission to the DRC Program (See Appendix E).

Procedure

Archival data from a sample of 102 parolees admitted to the DRC, VOADV in Camden, New Jersey from February 28, 2006 to June 23, 2006 were gathered and analyzed. There were eight parolees in the sample who were discharged for administrative reasons: medical, psychological, or reason unavailable. These eight cases were eliminated from the study, because they did not fall either into successful or into unsuccessful completion status. As part of the admission protocol, each parolee admitted to the DRC Program was given the TCU Drug Screen II, the TCU Treatment Motivation Scales, the TCU Criminal Thinking Scales, and the PDS. It is noted, however, that there were several parolees admitted during this timeframe for whom the testing instruments were not administered, because they did not remain in the program long enough to complete the questionnaires.

Data from the 94 completed questionnaires were collected and three factors were evaluated: level of substance abuse severity, level of treatment motivation, and level of criminal thinking. Results of the PDS were utilized to identify those participants who distorted their responses on the other three scales. Treatment retention or completion was measured by the number of days that parolees remained in the DRC program.

Participant Consent. At the time of their admission to the DRC, parolees were routinely given the four questionnaires to complete as part of the intake process: the PDS, the TCU Drug Screen II, the TCU Treatment Motivation Scales, and the Criminal Thinking Scales. All are self-administered instruments. The researcher collected archival data via DRC client files. No participant consent forms were needed in this study.

Treatment Controls. Each participant attended the same facility. The DRC in Camden has been operational since June 1998, serving individuals who are transitioning from prison to the community while on parole status. Program attendance at the DRC consists of 4 hours per day, 7 days per week. All parolee admissions are required to report to the DRC for a period of 90 days or 360 hours. The program philosophy of the DRC includes the mission of the VOA Community Corrections Programs “to assist each resident in realizing a full and thorough re-integration back to their communities via four major component: 1) cognitive behavioral treatment interventions; 2) management of risk for re-offending in relationship to criminogenic need; 3) accountability focused; and 4) community involvement and client re-integration”.

The DRC program includes comprehensive assessment, utilizing the client interview and various valid and reliable assessment instruments. The TCU Drug Screen II, TCU

Motivation Scales, TCU Criminal Thinking Scales, and the PDS were recent additions to the intake process for all admissions. Based on level of risk and need, clients are assigned to participate in various treatment components including Reasoning and Rehabilitation (cognitive skills training); Self-Management and Recovery Training (SMART) (a cognitive restructuring program focusing on building motivation, coping with urges, problem-solving and lifestyle balance); Offender Substance Abuse Pre-Release Program (OSAPP) (26-session cognitive behavioral program focusing on relapse prevention of substance abuse followed by an 8-session maintenance group); CALM (24-session skills building program focusing on anger management via cognitive restructuring techniques), Life Skills; and Job Readiness.

Educational presentations, individual case management sessions, and leisure time activities were basically the same for all participants. Treatment occurs within a community-based treatment modality, which utilizes a cognitive-behavioral approach within the myriad of available program components. It is based on a phase and point system that places behavioral expectations on the parolees and holds them accountable for their actions and decisions. One of the expectations of the DRC program staff is that each parolee will complete all of the assigned treatment components within the 90-day timeframe, will successfully complete the program, and will continue to maintain a crime-free lifestyle post treatment.

Outcome Measures. Treatment retention or completion was measured by the number of days spent in the DRC program. Data were collected via DRC client records and included socio-demographic information, history of substance use/abuse, dates of

admission, and dates of discharge or completion. The reasons for discharge prior to program completion were also documented. The discharge criterion was sorted into two categories: successful program completion and non-successful program completion.

Results

Multiple Regression Analysis

Multiple regression analysis was used to measure three predictor variables: substance abuse severity, treatment motivation, and criminal thinking on the outcome variable of treatment retention or completion as measured by the number of days spent in treatment.

Multiple Regression analysis was also utilized to examine the degree to which participants were deceptive or distorted their answers to the questions on the three TCU instruments that measured substance abuse severity, treatment motivation, and criminal thinking.

Socio-Demographics

The sample group (n=94) was composed of adult male parolees with a mean age of 26.7 years (SD=6.45), who were admitted to the DRC. Seventy-six percent of the sample group identified themselves as African-American; 23% identified as Latino; and 1% identified as Caucasian. According to the Bureau of Justice Statistics (2006), this study sampling appears consistent with the trend of racially identified male inmates serving prison sentences in the United States in 2005: sixty-five percent of the inmates identified as African American, 25% identified as Hispanic, and 10% identified as Caucasian. It seems that the most noticeable difference in the current study was the apparent overrepresentation of African American parolees, particularly when compared to Caucasian parolees in the sample.

In the category of marital status, an overwhelming majority of the sample self-reported as single (95%), with the remaining sample as married (4%) or divorced (1%).

Twenty-two percent of the sample had graduated from high school; 17% had acquired high school equivalency, 43% completed one of the grades from 6 through 11, and no information was available for the remaining 18%. Socio-demographic characteristics are shown on Table 1.

Table 1

Table of Socio-Demographic Characteristics Mean Age and Other Demographic Characteristics by Program Completion

| Characteristic | Successful | % | Non-Successful | % | Total | % |
|----------------------------|------------|-------|----------------|------|-------|-------|
| Mean Age (in years) | 28.5 | | 25.0 | | 26.7 | |
| Marital Status | | | | | | |
| Single | 26 | 29.2 | 63 | 70.8 | 89 | 94.7 |
| Married | 3 | 75.0 | 1 | 25.0 | 4 | 4.3 |
| Divorced | 1 | 100.0 | 0 | 0 | 1 | 1.1 |
| Race | | | | | | |
| African American | 21 | 30.0 | 50 | 70.0 | 71 | 75.5 |
| Caucasian | 1 | 100.0 | 0 | 0 | 1 | 1.1 |
| Hispanic | 8 | 36.4 | 14 | 63.6 | 22 | 23.4 |
| Education | | | | | | |
| H.S. Graduate | 9 | 42.9 | 12 | 57.1 | 21 | 22.3 |
| GED | 4 | 25.0 | 12 | 75.0 | 16 | 17.0 |
| Grade 6 – 11 | 14 | 35.0 | 26 | 65.0 | 40 | 42.6 |
| Not Available | 0 | | 0 | | 17 | 18.1 |
| Total: Success/Non-Success | 30 | 31.9 | 64 | 68.1 | 94 | 100.0 |

Of the total sample, almost 32% successfully completed the DRC program and slightly more than 68% were unsuccessful. Although the DRC is a 90-day treatment program, the average length of stay in treatment for those parolees who successfully completed the DRC program was 98.6 days (range = 7-152 days). Those parolees who failed to complete the DRC program successfully spent an average of 53.5 days in treatment program (range = 3-122 days).

Eighty-six percent of the sample admitted to substance abuse over the previous 12 months or had a documented history of substance abuse, or both. For the remaining 14% of those who denied substance abuse, no documentation of a substance abuse history was

available. Incidentally, two of the 13 parolees who had denied abuse of any substance(s) over the previous 12 months had admitted to using alcohol during that time. It is not possible to determine how many of the “deniers” had a substance abuse history beyond the 12-month period, because that information was not included in the drug screen.

The Deception Measures

The deception scales were administered in the current study to measure levels of deception or socially desirable responding. The two subscales, Impression Management and Self-Deceptive Enhancement, are theoretically distinct and required separate scoring. A significant negative correlation was found between the subscale of Impression Management and substance abuse severity ($r = -.226$; $p < .05$), but not in the overall deception scale. These results suggested that parolees who scored lower on the substance abuse measure were attempting to impress others by placing themselves in a favorable light. According to Paulhus (2005), this is related to a crude form of dissimulation known as faking or lying.

A significant, negative relationship was also found between criminal thinking and the Self-Deceptive Enhancement subscale ($r = -.204$; $p < .05$), indicating that respondents were trying to be honest but exaggerated their virtues as a result of self-deception.

There was no significant correlation found between the level of treatment motivation and the overall PDS or between treatment motivation and either of the PDS subscales, Self-Deceptive Enhancement and Impression Management. These findings suggested that the parolees in this sample candidly answered the questionnaires on the TCU Treatment Motivation Scales.

Predictor Variables

Results of this study yielded a strong, positive relationship between the factors of substance abuse severity and motivation for treatment ($r = .633$; $p < .01$). This indicates that the parolees with higher levels of substance abuse also tended to be more motivated for treatment. These findings supported earlier studies that yielded significant, positive relationships between the factors of substance abuse severity and motivation for treatment (Boyle, et al., 2000; Rapp, et al., 2003; Zule, et al., 2003). Further, these results are congruent with the “bottoming out” concept (Shen, et al., 2000).

Study results also yielded a weaker, yet significant, positive relationship between the factors of substance abuse severity and criminal thinking ($r = .236$; $p < .05$). These findings suggest that participants with increased levels of substance abuse severity also had increased levels of criminal thinking. No previous studies were found to corroborate these findings.

In addition, results of this study indicated a strong, positive relationship between motivation and criminal thinking ($r = .379$; $p < .05$). These findings suggested that parolees in the sample, who showed higher levels of treatment motivation, experienced higher levels of criminal thinking. No other studies examined these issues.

Age and Motivation

A significant, positive correlation was also found between age and motivation, indicating that older parolees showed more motivation for treatment than their younger counterparts ($r = .214$; $p < .05$). These findings are supportive of previous study findings, which indicate that younger individuals tend to experience poorer treatment outcomes in

offender rehabilitation programs (Andrews & Bonta, 2003; Gendreau, Little, & Goggin, 1996) and that older offenders tend to complete treatment programs more often than the younger offenders (Roy & Grimes, 2002).

Predictor Variables and Outcome Variable

There were no significant relationships found among any of the predictor variables and the outcome variable, indicating that substance abuse severity, treatment motivation, nor criminal thinking had any discernible influence on treatment retention or completion. Some of these findings support previous research efforts.

Boyle, et al. (2000), Neff & Zule (2002), and Weisner, et al.(2001) found higher levels of substance abuse associated with increased readiness at treatment entry, but Hser, et al.(1998) found no relationship between substance abuse severity and treatment entry. Substance abuse severity was found to be predictive of treatment entry but not treatment retention (Finney and Moos, 1995; Kaskutas, et al., 1997; Zule, et al., 2003). The current study is consistent with the literature regarding substance abuse severity and treatment retention.

Joe, et al. (1998) found treatment readiness to be a significant predictor of treatment retention both in a 90-day residential substance abuse treatment program and in a 360-day outpatient methadone programs. The results of the current study were inconsistent with the findings of this previous study.

Although a substantial amount of literature concerning the factor of criminal thinking is available, no previous research studies were found specifically measuring the potential influence of the criminal thinking factor on treatment retention or completion.

Descriptive statistics, viz., means and standard deviations of the predictor variables, the outcome variable, and the deception scale, can be found on Table 2.

Table 2

Means, Standard Deviations of Predictor Variables, Outcome Variable, Deception Scale Scores

| Variable | Minimum | Maximum | <u>M</u> | <u>SD</u> |
|-----------------------------|---------|---------|----------|-----------|
| Days in Treatment | 3 | 152 | 67.87 | 8.19 |
| TCU Drug Screen II | 0 | 9 | 1.12 | 2.06 |
| Treatment Motivation Scales | 33 | 116 | 61.80 | 16.59 |
| Problem Recognition | 9 | 37 | 14.26 | 5.86 |
| Desire for Help | 7 | 30 | 16.09 | 4.78 |
| Treatment Readiness | 8 | 33 | 20.56 | 5.23 |
| External Pressures | 5 | 22 | 10.57 | 4.27 |
| Criminal Thinking Scales | 41 | 134 | 77.41 | 17.46 |
| Entitlement | 7 | 25 | 12.41 | 4.14 |
| Justification | 5 | 19 | 9.82 | 3.43 |
| Power Orientation | 7 | 29 | 13.51 | 5.23 |
| Cold Heartedness | 5 | 25 | 15.69 | 5.08 |
| Criminal Rationalization | 7 | 29 | 15.51 | 4.93 |
| Personal Responsibility | 5 | 26 | 11.44 | 4.09 |
| Paulhus Deception Scales | 3 | 31 | 16.88 | 6.13 |
| Impression Management | 0 | 15 | 8.94 | 3.31 |
| Self-Deceptive Enhancement | 0 | 18 | 7.95 | 4.12 |
| (n=94) | | | | |

The relationship between the predictor variables and the demographic variable of age with the outcome variable can be seen on Table 3.

Table 3

Correlations of Dimensions of TCU Drug Screen, Treatment Motivation Scores, Criminal Thinking Scores, Paulhus Deception Scores, and Age with Measures of Treatment Retention

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------------------|-------|--------|--------|--------|--------|--------|--------|-------|
| Days in Treatment | 1 | .081 | .047 | -.012 | .007 | .003 | .009 | -.073 |
| TCU Score | .081 | 1 | .633** | .236* | -.198 | -.112 | -.226* | .195 |
| TM Score | .047 | .633** | 1 | .379** | -.110 | -.083 | -.101 | .214* |
| CT Score | -.012 | .236* | .379** | 1 | -.212* | -.204 | -.139 | -.024 |
| PDS Score | .007 | -.198 | -.110 | -.212* | 1 | .862** | .776** | .089 |
| SDE Subscore | .003 | -.112 | -.083 | -.204* | .862** | 1 | .350** | .005 |
| IM Subscore | .009 | -.226* | -.101 | -.139 | .776** | .350** | 1 | .158 |
| Age | -.073 | .195 | .214* | -.024 | .089 | .005 | .158 | 1 |

Note: Pearson Correlation (2-tailed). **Significant at .01 level; *Significant at .05 level

Discussion

Interpretation of Findings

It was expected that study results would show that the variables of substance abuse severity, motivation, and criminal thinking would have an impact on program retention or completion as measured by the number of days spent in the DRC program. It was also anticipated that there would be an interaction effect among the predictor variables. Findings of this study, however, were unable to establish significant relationships among any of the predictor variables and the outcome variable, indicating that neither substance abuse severity, motivation for treatment, nor criminal thinking had any influence on treatment retention or completion as measured by numbers of days in treatment. These findings support the null hypothesis, which states that substance abuse severity, motivation, and criminal thinking have no impact on treatment retention or completion. In addition, no interaction effect among the predictor variables was found.

With regard to substance abuse severity, it was anticipated that parolees who had a more severe substance abuse/addiction problem were already “at their bottom” and, thus, would be more likely to seek and complete treatment than those who had less serious substance abuse issues. No relationship was found, however, between substance abuse severity and treatment retention.

There are several possible explanations for these results. One explanation might be that some of the parolees in the sample were either “in denial” of having substance abuse problems or minimized their substance use, which would not have yielded an accurate measure of substance abuse severity. Responses on the drug screen questionnaires

seemed to support this line of reasoning, because many parolees who denied having substance abuse problems (per TCU Drug Screen II scores of 0–2) indicated daily and/or heavy alcohol or other drug use in the previous 12 months.

Another reason might be found in the deception scales; i.e., the degree to which the sample group answered questionnaires in a candid and/or honest manner. Results of the deception scales suggested that parolees in the sample group who scored lower on the substance abuse severity measure were attempting to impress others by placing themselves in a favorable light (faking or lying). This is understandable, given the fact that a parolee population that has been mandated to treatment by the Board of Probation and Parole. These individuals may have manipulated the drug screen questionnaire in such a manner that would portray them as not needing substance abuse treatment. Therefore it is likely that DRC staff would have excused them from having to participate in the Offender Substance Abuse Pre-Release Program (OSAPP), additional programming that would have added several more hours a week to their treatment schedules. It is also possible that substance severity has no effect on treatment retention. In either case, the null hypothesis was upheld.

No significant relationship was found between the predictor variable of motivation and the outcome variable of treatment retention. Thus the hypothesis, stating that parolees with higher levels of motivation would stay in treatment longer than parolees with lower levels of motivation, was unfounded and the null hypothesis was upheld. Also, there was no significant correlation found between levels of motivation for treatment and either of the two deception subscales. These findings suggested that parolees in the sample group

answered the motivational scales candidly, without deception, and that motivation had no influence on treatment retention. Although these findings were unexpected, it is possible that the more motivated parolees worked harder and completed treatment earlier than their less motivated counterparts. It is also possible that motivation for treatment alone is insufficient to have an impact on program completion.

Results of the study yielded no significant relationship between criminal thinking and program completion as measured by treatment retention. Accordingly, the null hypothesis was upheld. These results were unexpected, because offenders are often portrayed as individuals who easily become bored and are not “long-distance runners”. Thus it was expected that parolees with high levels of criminal thinking would stay in treatment for a shorter period of time. One possible explanation for these results might be found in the deception scales, in which a significant negative relationship was found between self-deception and criminal thinking. These findings suggest that parolees in the sample who scored lower on the criminal thinking measure were trying to be honest, but tended to exaggerate their virtues as a result of self-deception. Thus if those parolees were not being candid on the criminal thinking measure, it is difficult to say whether or not criminal thinking had an effect on program retention or completion.

According to the current study, therefore, no significant relationships were found between the predictor variables and the outcome variable. Reasons for these findings may be found in the limitations of the study, some of which seem inherent within the study design and/or the program structure and operation.

Study Limitations and Recommendations

First of all, it is important to note that the outcome variable (treatment retention) did not adequately represent program success or failure (program completion). It was initially believed that the parolees who stayed in treatment 90 days or longer would successfully complete the program and the parolees in the sample who discontinued treatment in fewer than 90 days would fail to complete the program. Data revealed, however, that many of the sample group successfully completed the 90-day program in well under 90 days. Conversely, many of the parolees who were therapeutically discharged or otherwise failed to complete the program attended the DRC for well over 90 days. Thus using the 90-day treatment criteria to measure program retention or completion may have seriously compromised study results. It is recommended that future studies utilize a dichotomous variable (successful and unsuccessful program completion) rather than a continuous variable (number of days spent in treatment) as the outcome measure.

Second, parolee files were often incomplete, which might have confounded study results. Numerous parolees returned questionnaires with unanswered questions. The questionnaires were returned for completion at various intervals during the parolees' treatment stays. It is believed that incomplete archived data, as well as the researcher's lack of control over the test administration process, were two additional factors that seriously compromised the study results. It would be recommended in future studies to have the researcher administer the questionnaires to ensure consistency of instruction and timely instrument completion.

Third, it is important to note that the majority of parolees in this study used alcohol

or other drugs in the 12 months prior to treatment or incarceration; however, it is not clear how many of them actually abused these substances. Typically, individuals on parole supervision are stipulated to maintain total abstinence from alcohol and/or other drugs. Thus any use of illegal drugs is considered “abuse” and one drink or drug taking incident could be considered a parole violation. In addition, reliance on one drug screen measure for substance abuse severity was another possible study limitation. It is recommended that future studies include a drug/alcohol assessment instrument in addition to a drug screen, which may yield more accurate results.

Finally, another limitation of the study might be found in the level of education, because 39% of the study group had less than a high school education. It is possible that this particular group was not able to comprehend the questions adequately or to formulate accurate responses when completing the questionnaires. It is recommended that a reading comprehension screen be utilized in future studies.

Conclusion and Study Contributions

In summary, substance abuse and addiction continue to burden our society. The far-reaching effects of these disorders have invaded individual lives, families, and communities throughout the United States. The devastating effects of substance abuse and addiction can be easily seen in the increase of criminal activity, in overcrowded prisons, and in escalating rates of recidivism. The United States Department of Justice (2006) reported that the criminal justice population in this country has set a record with 7 million people, i.e., one in every 32 adults, being behind bars, being on probation, or being on parole by the end of 2005. Many of these individuals are victims of alcoholism

or illicit drug addiction. Numerous treatment programs designed to work with the offender inside the prison walls and in community correctional programs operate with the hope of making a difference. Sadly, many of these programs ultimately fail in their efforts to lead inmates and parolees down the path to recovery from substance abuse or addiction to a law-abiding and pro-social lifestyle.

It is believed that the current study will provide useful information to the VOADV regarding treatment of substance abuse and addiction, as well as to program structure and operation. It is further anticipated that results of this study will benefit the larger criminal justice system and treatment providers in general, who offer services to substance abusing/addicted parolee populations. Although many of the study results were inconclusive, it is believed that they offer valuable information for future research studies.

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Appendix A

PRINCIPLES OF EFFECTIVE CORRECTIONAL INTERVENTION

1. Bases design and implementation on a proven theoretical model: Effective programs work within the context of a proven psychological theory of criminal behavior. Proven theories include cognitive-behavioral and social learning theories.
2. Provides intensive services: Effective programs offer services that occupy 40% to 70% of the offender's time while in the program and last 3 to 9 months. The actual length of the program should be driven by the specific behavioral objectives that the program targets.
3. Conducts risk and needs assessments: Effective programs utilize validated instruments to conduct comprehensive and detailed assessments of the risk and needs of offenders. A risk assessment identifies the likelihood that an inmate will re-offend upon release to the street. A needs assessment identifies the specific problems that contribute to an offender's criminally deviant behavior.
4. Targets high-risk cases: Effective programs specifically target high-risk cases. Low-risk cases demonstrate a lower probability of recidivism even in the absence of any program participation.
5. Targets specific criminogenic needs: Effective programs target multiple specific problems that have been found to contribute to re-offending and are amenable to change (dynamic factors).
6. Matches offender responsivity with appropriate program settings and therapist styles: Effective programs are rooted in the notion that there can be important interactions between the personality and learning style of individuals and their settings or situations. As a result, an effective program attempts to identify and match an offender's "responsivity" needs with appropriate program settings and therapist styles.
7. Utilizes a cognitive-behavioral approach: Effective programs attempt to alter an offender's cognitions, values, attitudes and expectations that maintain anti-social behavior. Such cognitive-behavioral programs place a strong emphasis on problem solving, reasoning, self-control and behavior modification.
8. Disrupts the delinquency network: Effective programs provide a structure that disrupts the delinquency network by placing offenders in situations (around people and places), where pro-social activities predominate.
9. Reinforces integrity of services: Effective programs assure high levels of program integrity by continually monitoring areas such as program development, organizational structure, and staff selection and training. Programs that develop well-structured manuals and provide sufficient staff training are more effective.
10. Includes a relapse prevention component: Effective programs rehearse alternative pro-social responses/behaviors in increasingly difficult anticipated situations and provide booster sessions after the formal phase of treatment. Such relapse prevention strategies should be provided in the community to the extent possible.

Appendix B

The following is a sample of the questions included in the Paulhus Deception Scales:

| PDS (BIDR Version 7) | | by Delroy L. Paulhus, Ph.D. | | | | |
|--|--|------------------------------------|---|---|----------------------|----------------------------------|
| Client ID: _____ | | Age: _____ | | Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female | | Date: ____/____/____ MM DD YY |
| Instructions: Read each statement, and circle the number that best describes you, from <i>Not True</i> to <i>Very True</i> about you. | | | | | | |
| | | Not True | | | Very True | |
| 1. | My first impressions of people usually turn out to be right. | 1 | 2 | 3 | 4 | 5 |
| 2. | It would be hard for me to break any of my bad habits. | 1 | 2 | 3 | 4 | 5 |
| 3. | I don't care to know what other people really think of me. | 1 | 2 | 3 | 4 | 5 |
| 4. | I have not always been honest with myself. | 1 | 2 | 3 | 4 | 5 |
| 5. | I always know why I like things. | 1 | 2 | 3 | 4 | 5 |
| 6. | When my emotions are aroused, it biases my thinking. | 1 | 2 | 3 | 4 | 5 |



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In Canada, 3770 Victoria Park Avenue, Toronto, ON M2H 3M6, (800) 268-6011. Fax, 888-540-4484, Email, customer.service@mhs.com, Web Site, <http://www.mhs.com>.

Appendix C

FOR ADMINISTRATIVE PURPOSES

TCU Drug Screen II*Instruction Page*

The following questions ask about your drug use (including alcohol) in the past 12 months. Please answer them by marking only one circle for each question. If you do not feel comfortable giving an answer to a particular question, you may skip it and move on to the next question.

If you are an inmate, please refer to the 12-month period immediately before you were locked up; that is, the last time you were in the "free world."

Also, alcohol is a drug. Your answers to questions about drug use need to include alcohol use, such as drinking beer.

The example below shows how to mark the circles --

| | | | |
|---------------------------|--|------------|-----------|
| | <table border="1"><tr><td><i>Yes</i></td><td><i>No</i></td></tr></table> | <i>Yes</i> | <i>No</i> |
| <i>Yes</i> | <i>No</i> | | |
| 1. I like ice cream. | <input type="radio"/> <input checked="" type="radio"/> | | |

FOR ADMINISTRATIVE PURPOSES

TCU DRUG SCREEN II

During the last 12 months (before being locked up, if applicable) –

| | Yes | No |
|---|-----------------------|-----------------------|
| 1. Did you use <u>larger amounts of drugs</u> or use them <u>for a longer time</u> than you planned or intended?..... | <input type="radio"/> | <input type="radio"/> |
| 2. Did you <u>try to cut down on your drug use</u> but were <u>unable</u> to do it? | <input type="radio"/> | <input type="radio"/> |
| 3. Did you <u>spend a lot of time</u> getting drugs, using them, or recovering from their use?..... | <input type="radio"/> | <input type="radio"/> |
| 4. Did you <u>get so high or sick</u> from drugs that it – | | |
| a. <u>kept you from</u> doing work, going to school, or caring for children? | <input type="radio"/> | <input type="radio"/> |
| b. <u>caused an accident</u> or put you or others in danger? | <input type="radio"/> | <input type="radio"/> |
| 5. Did you <u>spend less time at work, school, or with friends</u> so that you could use drugs?..... | <input type="radio"/> | <input type="radio"/> |
| 6. Did your drug use <u>cause</u> – | | |
| a. <u>emotional or psychological</u> problems? | <input type="radio"/> | <input type="radio"/> |
| b. problems with <u>family, friends, work, or police</u> ? | <input type="radio"/> | <input type="radio"/> |
| c. <u>physical health or medical</u> problems? | <input type="radio"/> | <input type="radio"/> |
| 7. Did you <u>increase the amount</u> of a drug you were taking so that you could get the same effects as before? | <input type="radio"/> | <input type="radio"/> |
| 8. Did you ever keep taking a drug to <u>avoid withdrawal symptoms</u> or keep from <u>getting sick</u> ? | <input type="radio"/> | <input type="radio"/> |
| 9. Did you <u>get sick or have withdrawal symptoms</u> when you quit or missed taking a drug? | <input type="radio"/> | <input type="radio"/> |
| 10. Which <u>drug</u> caused the <u>most serious problem</u> ? [CHOOSE ONE] | | |
| <input type="radio"/> None | | |
| <input type="radio"/> Alcohol | | |
| <input type="radio"/> Marijuana/Hashish | | |
| <input type="radio"/> Hallucinogens/LSD/PCP/Psychedelics/Mushrooms | | |
| <input type="radio"/> Inhalants | | |
| <input type="radio"/> Crack/Freebase | | |
| <input type="radio"/> Heroin and Cocaine (mixed together as Speedball) | | |
| <input type="radio"/> Cocaine (by itself) | | |
| <input type="radio"/> Heroin (by itself) | | |
| <input type="radio"/> Street Methadone (non-prescription) | | |
| <input type="radio"/> Other Opiates/Opium/Morphine/Demerol | | |
| <input type="radio"/> Methamphetamines | | |
| <input type="radio"/> Amphetamines (other uppers) | | |
| <input type="radio"/> Tranquilizers/Barbiturates/Sedatives (downers) | | |

FOR ADMINISTRATIVE PURPOSES

11. How often did you use each type of drug during the last 12 months?

| | DRUG USE IN LAST 12 MONTHS | | | | |
|---|----------------------------|------------------------|-------------------------|------------------------|-----------------------|
| | NEVER | ONLY A FEW TIMES | 1-3 TIMES A MONTH | 1-5 TIMES A WEEK | ABOUT EVERY DAY |
| a. <u>Alcohol</u> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. <u>Marijuana/Hashish</u> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. <u>Hallucinogens/LSD/PCP/</u> <u>Psychedelics/Mushrooms</u> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. <u>Inhalants</u> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. <u>Crack/Freebase</u> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. <u>Heroin and Cocaine</u> (mixed together as Speedball) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. <u>Cocaine</u> (by itself) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h. <u>Heroin</u> (by itself) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i. <u>Street Methadone</u> (non-prescription) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j. <u>Other Opiates/Opium/Morphine/Demerol</u> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k. <u>Methamphetamines</u> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| l. <u>Amphetamines</u> (other uppers) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| m. <u>Tranquilizers/Barbiturates/Sedatives</u> (downers) ... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| n. Other (<i>specify</i>) _____ | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

12. During the last 12 months, how often did you inject drugs with a needle?

☐ *Never* ☐ *Only a few times* ☐ *1-3 times per month* ☐ *1-5 times per week* ☐ *Daily*

13. How serious do you think your drug problems are?

☐ *Not at all* ☐ *Slightly* ☐ *Moderately* ☐ *Considerably* ☐ *Extremely*

14. How many times before now have you ever been in a drug treatment program?
[DO NOT INCLUDE AA/NA/CA MEETINGS]

☐ *Never* ☐ *1 time* ☐ *2 times* ☐ *3 times* ☐ *4 or more times*

15. How important is it for you to get drug treatment now?

☐ *Not at all* ☐ *Slightly* ☐ *Moderately* ☐ *Considerably* ☐ *Extremely*

Appendix D

TCU Treatment Motivation Scales

(Taken from CESI: Client Evaluation of Self at Intake)

PLEASE RESPOND TO EACH OF THE STATEMENTS BELOW BY FILLING IN THE CIRCLE TO INDICATE HOW MUCH YOU AGREE OR DISAGREE WITH EACH ONE. MARK ONLY ONE CHOICE FOR EACH STATEMENT.
THANK YOU FOR YOUR PARTICIPATION.

| | Disagree Strongly (1) | Disagree (2) | Uncertain (3) | Agree (4) | Agree Strongly (5) |
|---|-----------------------------|-----------------------|-----------------------|-----------------------|--------------------------|
| 1. Your drug use is a problem for you. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. You need help in dealing with your drug use. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. You have too many outside responsibilities now to be in this treatment program. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. Your drug use is more trouble than it's worth. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. You could be sent to jail or prison if you are not in treatment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6. Your drug use is causing problems with the law. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7. This treatment program seems too demanding for you. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8. Your drug use is causing problems in thinking or doing your work. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 9. It is urgent that you find help immediately for your drug use. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 10. You feel a lot of pressure to be in treatment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 11. Your drug use is causing problems with your family or friends. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 12. This treatment may be your last chance to solve your drug problems. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 13. You are tired of the problems caused by drugs. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| Disagree Strongly | Disagree | Uncertain | Agree | Agree Strongly |
|----------------------|----------|-----------|-------|-------------------|
| (1) | (2) | (3) | (4) | (5) |

- | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 14. This kind of treatment program will not be very helpful to you. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 15. Your drug use is causing problems in finding or keeping a job. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 16. You have legal problems that require you to be in treatment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 17. You plan to stay in this treatment program for awhile. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 18. You will give up your friends and hangouts to solve your drug problems. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 19. You can quit using drugs without any help. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 20. Your drug use is causing problems with your health. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 21. You are in this treatment program because someone else made you come. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 22. You are concerned about legal problems. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 23. Your life has gone out of control. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 24. Your drug use is making your life become worse and worse. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 25. This treatment program can really help you. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 26. You want to be in a drug treatment program. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 27. Your drug use is going to cause your death if you do not quit soon. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 28. You want to get your life straightened out. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 29. You have family members who want you to be in treatment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Appendix E

FOR ADMINISTRATIVE PURPOSES

TCU Criminal Thinking Scales

PLEASE RESPOND TO EACH OF THE STATEMENTS BELOW BY FILLING IN THE CIRCLE TO INDICATE HOW MUCH YOU AGREE OR DISAGREE WITH EACH ONE. MARK ONLY ONE CHOICE FOR EACH STATEMENT.
THANK YOU FOR YOUR PARTICIPATION.

Today's

Date:

| | | |
|----|-----|----|
| MO | DAY | YR |
|----|-----|----|

| Disagree Strongly | Disagree | Uncertain | Agree | Agree Strongly |
|----------------------|----------|-----------|-------|-------------------|
| (1) | (2) | (3) | (4) | (5) |

- | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. You get upset when you hear about someone who has lost everything in a natural disaster. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. You deserve special consideration. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. You are in prison now because you had a run of bad luck. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. The real reason you are in prison is because of your race. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. When people tell you what to do, you become aggressive. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6. Anything can be fixed in court if you have the right connections. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7. Seeing someone cry makes you sad. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8. You rationalize your irresponsible actions with statements like "Everyone else is doing it, so why shouldn't I?". | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 9. Bankers, lawyers, and politicians get away with breaking the law every day. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 10. You have paid your dues in life and are justified in taking what you want. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 11. When not in control of a situation, you feel the need to exert power over others. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 12. When questioned about the motives for engaging in crime, you justify your behavior by pointing out how hard your life has been. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 13. You are sometimes so moved by an experience that you feel emotions that you cannot describe. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 14. You argue with others over relatively trivial matters. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 15. If someone disrespects you then you have to straighten them out, even if you have to get physical with them to do it. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 16. You like to be in control. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

FOR ADMINISTRATIVE PURPOSES

| Disagree Strongly | Disagree | Uncertain | Agree | Agree Strongly |
|----------------------|----------|-----------|-------|-------------------|
| (1) | (2) | (3) | (4) | (5) |

- | | | | | | | |
|-----|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 17. | You find yourself blaming the victims of some of your crimes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 18. | You feel people are important to you. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 19. | This country's justice system was designed to treat everyone equally. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 20. | Police do worse things than do the "criminals" they lock up. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 21. | You think you have to pay back people who mess with you. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 22. | Nothing you do here is going to make a difference in the way you are treated. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 23. | You feel you are above the law. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 24. | It is okay to commit crime in order to pay for the things you need. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 25. | Society owes you a better life. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 26. | Breaking the law is no big deal as long as you do not physically harm someone. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 27. | You find yourself blaming society and external circumstances for the problems in your life. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 28. | You worry when a friend is having personal problems. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 29. | The only way to protect yourself is to be ready to fight. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 30. | You are not to blame for everything you have done. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 31. | It is unfair that you are imprisoned for your crimes when bank presidents, lawyers, and politicians get away with their crimes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 32. | Laws are just a way to keep poor people down. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 33. | Your good behavior should allow you to be irresponsible sometimes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 34. | It is okay to commit crime in order to live the life you deserve. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 35. | Prosecutors often tell witnesses to lie in court. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 36. | You justify the crimes you have committed by telling yourself that if you had not done it, someone else would have. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 37. | You may be a criminal, but your environment made you that way. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |